Abstract of the Disclosure

Provided are a simultaneous bi-directional (SBD) buffer including a self-test circuit having a function of generating an input signal. By using the self-test circuit, self-testing can be accurately performed by generating the input signal in a self-test mode, and a self-test method used by the SBD buffer. The SBD buffer includes an output driver, an input receiver, a first multiplexer, and an input signal generating circuit. The output driver receives an output data signal and outputs the received output data signal to an input/output node. The input receiver receives a signal generated by combining an input data signal inputted to the input/output node with the output data signal, compares the voltage level of the signal with a reference voltage, and outputs the comparison result. The first multiplexer outputs the reference voltage in response to a reference voltage selection signal. The input signal generating circuit generates an input signal used for testing in a test mode and outputs the input signal used for testing as the input data signal. Thus, it is possible to accurately test the performance of the SBD buffer when the SBD buffer performs a self-test.

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